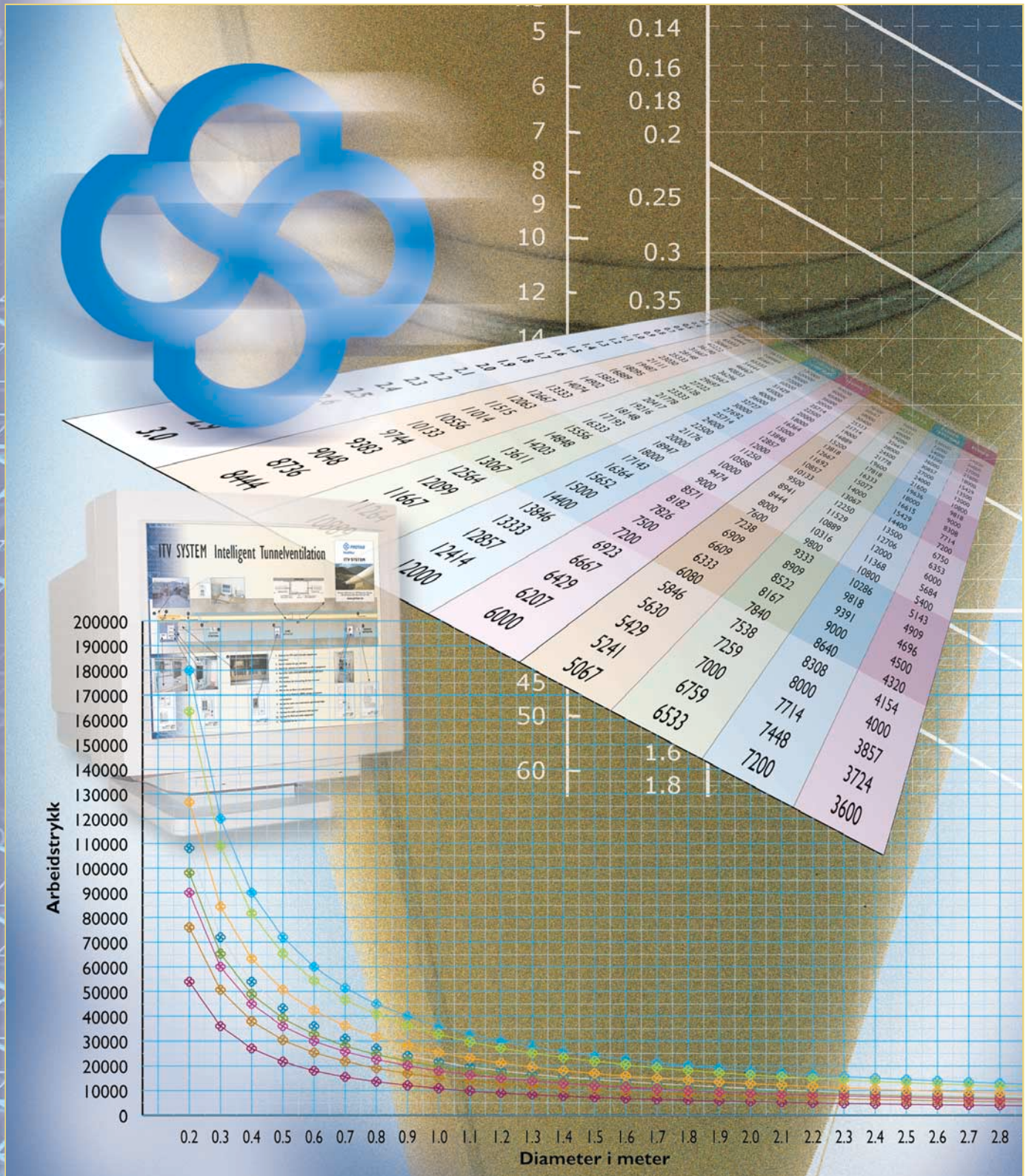


Ventiflex grades

Technical specifications



Product specification

Protan Ventiflex 9100FR

Special grade for use in mines and tunnels.

The lightest Ventiflex grade with the same plastic coating as the other grades. Flame-resistant and dimensionally stable. Quality-certified.

Colour: yellow/grey

Protan Ventiflex 6298FR

Grade specially designed for large diameters and more exacting requirements. For use in mines and tunnels.

Flame-resistant and with a thick plastic protective coating on both sides. Dimensionally stable.

Quality-certified.

Colour: yellow/grey

Protan Ventiflex 6698FR

Special grade for large diameters and high pressures. Flame-resistant.

For use in mines and tunnels and with a thick plastic protective coating on both sides. Dimensionally stable. Quality-certified.

Colour: yellow/grey

Protan Ventiflex 7498FR

Super grade for use in mines and tunnels with extreme requirements for the ventilation duct.

With extra thick plastic protective coating.

Flame-resistant and dimensionally stable.

Quality-certified.

Colour: Yellow/grey

Protan Ventiflex 7198FRAS

Special grade for explosive hazard locations. Anti-static and flame-resistant.

With a thick plastic protective coating. Dimensionally stable. Quality-certified. Anti-static and flame-resistant.

Colour: White/white

Protan Ventiflex 7498FRAS

Super grade for use in mines and tunnels with extreme requirements for the ventilation duct.

With extra thick plastic protective layer. Dimensionally stable. Quality-certified. Anti-static and flame-resistant.

Colour: white/white

Calculation of ventilation ducts

On the nomogram look up the friction loss in mmVS/PA per 100 m duct. There are also options for duct diameter (mm), air flow (m³/ft³ per second) and required fan power (hp/km per 100 m). Assuming it is known how much ventilation air is to be transported, the nomogram permits the calculation of the duct diameter and the fan power requirement.

From a knowledge of power prices and the price of ducts, the most economic solution can be found: a small duct diameter and a fan with a high power consumption - or the other way round.

Use of the nomogram presupposes that the ducts are properly suspended with airtight joints.

Inexpert suspension and leaky joints will considerably increase friction losses and power consumption.


Example of calculation:

Duct diam.: 1100 mm
 Air: 11.5 cu.m/sec
 Fan: 2 hp/100 m
 Press. drop: 9.7 mm/100 m


(See red area on nomogram.)


Symbols on graph

Safety factor 3


 7898FR and 7498FRAS

 6698FR


 6298FR and 7198FRAS


 9100FR

Safety factor 5

 7898FR and 7498FRAS

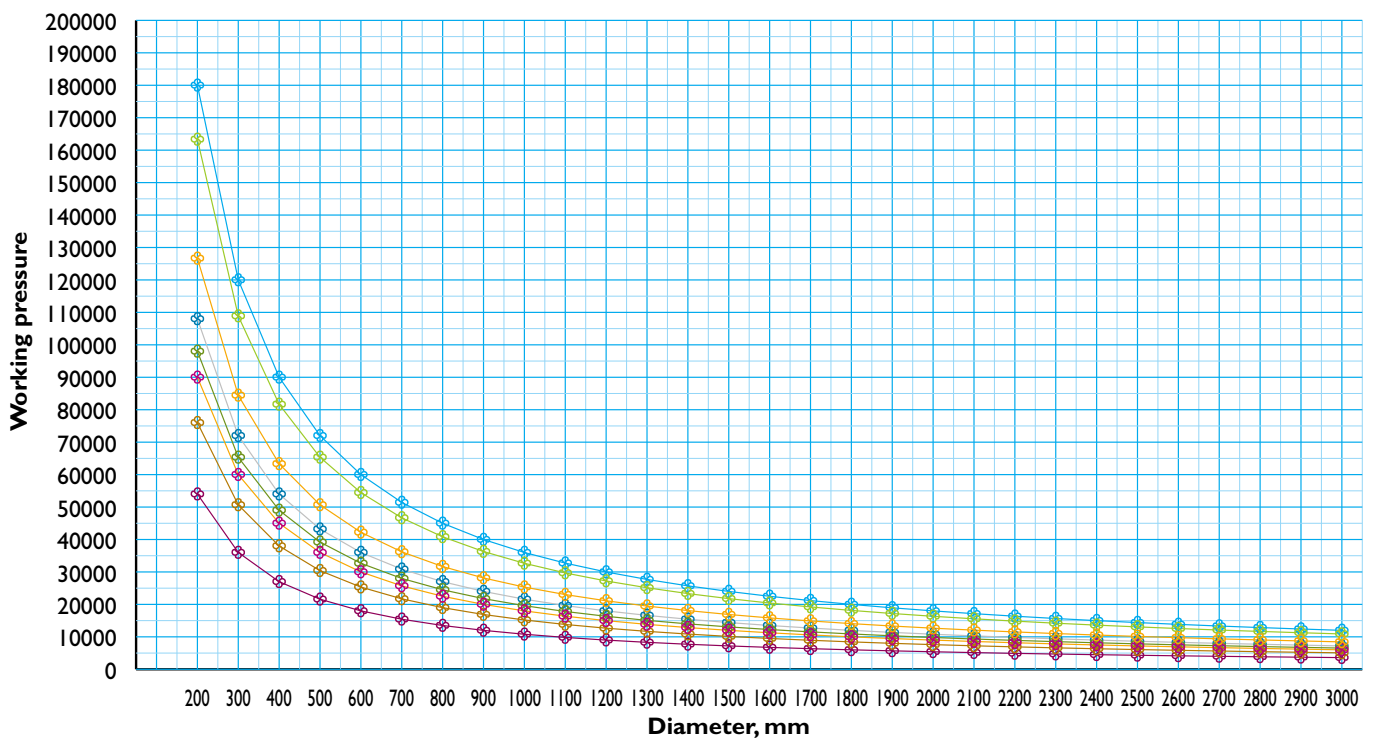
 6698FR

 6298FR and 7198FRAS

 9100FR

Diameter, mm	Safety factor n = 3 Units: Pa				Safety factor n = 5 Units: Pa			
	9100FR	6298FR 7198FRAS	6698FR	7498FR 7498FRAS	9100FR	6298FR 7198FRAS	6698FR	7498FR 7498FRAS
200	90000	126667	163333	180000	54000	76000	98000	108000
300	60000	84444	108889	120000	36000	50667	65333	72000
400	45000	63333	81667	90000	27000	38000	49000	54000
500	36000	50667	65333	72000	21600	30400	39200	43200
600	30000	42222	54444	60000	18000	25333	32667	36000
700	25714	36190	46667	51429	15429	21714	28000	30857
800	22500	31667	40833	45000	13500	19000	24500	27000
900	20000	28148	36296	40000	12000	16889	21778	24000
1000	18000	25333	32667	36000	10800	15200	19600	21600
1100	16364	23030	29697	32727	9818	13818	17818	19636
1200	15000	21111	27222	30000	9000	12667	16333	18000
1300	13846	19487	25128	27692	8308	11692	15077	16615
1400	12857	18095	23333	25714	7714	10857	14000	15429
1500	12000	16889	21778	24000	7200	10133	13067	14400
1600	11250	15833	20417	22500	6750	9500	12250	13500
1700	10588	14902	19216	21176	6353	8941	11529	12706
1800	10000	14074	18148	20000	6000	8444	10889	12000
1900	9474	13333	17193	18947	5684	8000	10316	11368
2000	9000	12667	16333	18000	5400	7600	9800	10800
1200	8571	12063	15556	17143	5143	7238	9333	10286
2200	8182	11515	14848	16364	4909	6909	8909	9818
2300	7826	11014	14203	15652	4696	6609	8522	9391
2400	7500	10556	13611	15000	4500	6333	8167	9000
2500	7200	10133	13067	14400	4320	6080	7840	8640
2600	6923	9744	12564	13846	4154	5846	7538	8308
2700	6667	9383	12099	13333	4000	5630	7259	8000
2800	6429	9048	11667	12857	3857	5429	7000	7714
2900	6207	8736	11264	12414	3724	5241	6759	7448
3000	6000	8444	10889	12000	3600	5067	6533	7200

The graph and table show the max. permitted working pressure. Where Ventiflex textiles are new and depending on the tensile strength of the yarn, the following working pressures in Pa can be applied with 3 or 5 times the safety factor.



Nomogram for dimensioning purposes

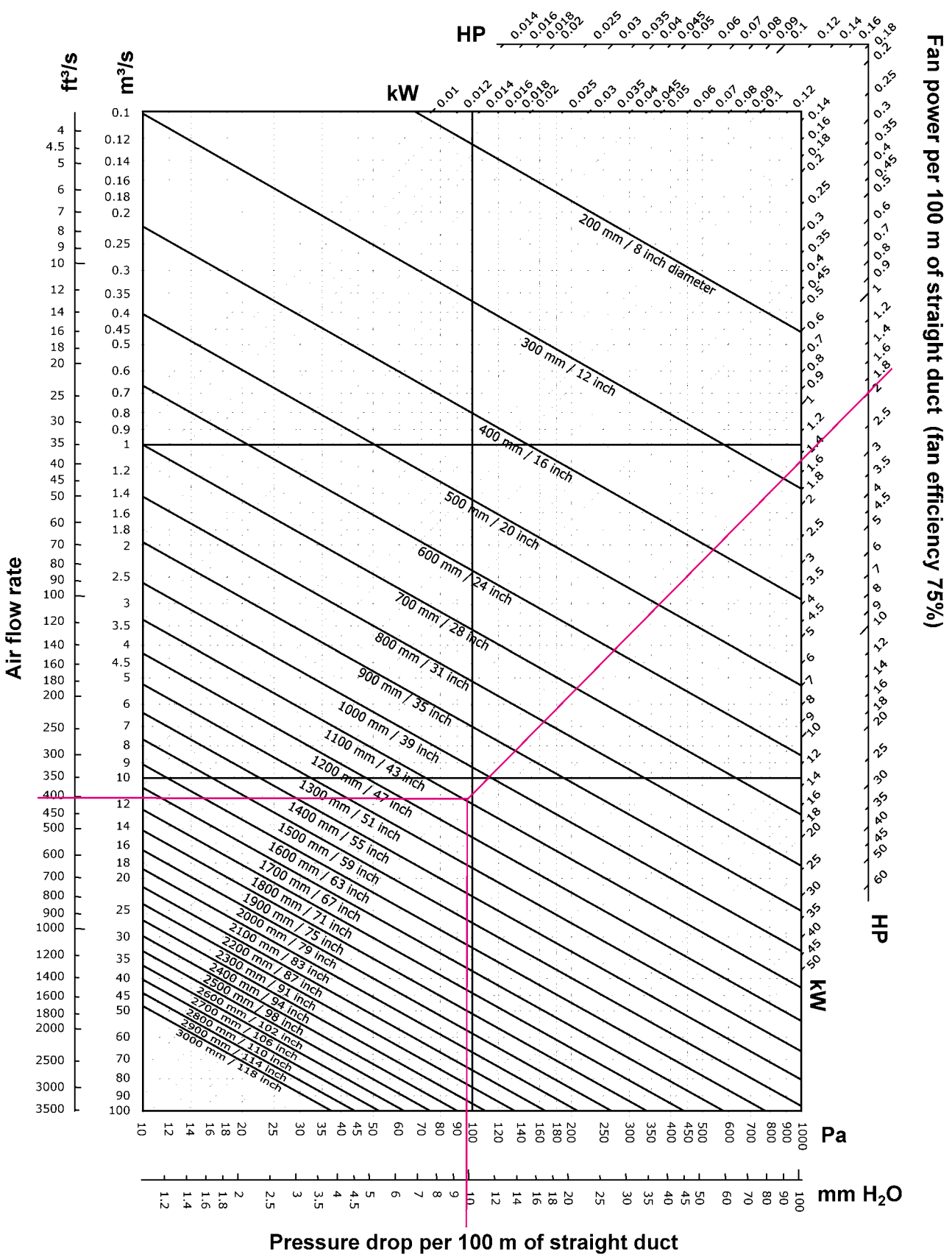


Table of weights and volumes

Duct diameter, mm	Approx. weight (kg) per metre, including couplings					Approx. length per m ³ including coupling
	9100FR	6298FR	6698FR	7498FR 7498FRAS	7198FRAS	
200	0.55	0.58	0.61	0.71	0.68	460 m
300	0.76	0.81	0.86	1.00	0.95	380 m
400	0.97	1.03	1.10	1.29	1.23	320 m
500	1.18	1.26	1.34	1.58	1.50	280 m
600	1.39	1.49	1.58	1.87	1.78	250 m
700	1.60	1.71	1.83	2.17	2.05	220 m
800	1.81	1.94	2.07	2.46	2.33	180 m
900	2.02	2.17	2.31	2.75	2.60	150 m
1000	2.23	2.39	2.55	3.04	2.88	130 m
1100	2.44	2.62	2.80	3.33	3.15	120 m
1200	2.65	2.84	3.04	3.62	3.43	110 m
1300	2.86	3.07	3.28	3.91	3.70	100 m
1400	3.07	3.30	3.52	4.20	3.98	90 m
1500	3.28	3.52	3.77	4.49	4.25	80 m
1600	3.49	3.75	4.01	4.79	4.53	70 m
1700	3.70	3.98	4.25	5.08	4.80	65 m
1800	3.91	4.20	4.49	5.37	5.08	60 m
1900	4.12	4.43	4.74	5.66	5.35	55 m
2000	4.33	4.66	4.98	5.95	5.63	50 m
2100	4.54	4.88	5.22	6.24	5.90	55 m
2200	4.75	5.11	5.46	6.53	6.18	45 m
2300	4.96	5.34	5.71	6.82	6.45	43m
2400	5.17	5.56	5.95	7.11	6.73	40 m
2500	5.38	5.79	6.19	7.41	7.00	37 m
2600	5.59	6.01	6.43	7.70	7.28	35 m
2700	5.80	6.24	6.68	7.99	7.55	33 m
2800	6.01	6.47	6.92	8.28	7.83	30 m
2900	6.22	6.69	7.16	8.57	8.10	27 m
3000	6.43	6.92	7.41	8.86	8.38	25 m



Protan Ventiflex - a unique supplier

First in Europe and now largest in the world - why?

- 1. The only supplier in the world to produce everything in-house.**
 - Basic textile in our own weaving mill.
 - Coating in our own coating plant.
 - The ready-made ducting in our own manufacturing plant.
 - All three factories are certified to ISO 9001 and ISO 14001.
- 2. Ventiflex determines quality levels for the whole product.**
 - We determine yarn quality
 - We determine the best weave for each ventilation duct type.
 - We determine the coating type.
 - We determine all the details on the finished duct.
- 3. The only producer in the world with special fabric just for ventilation ducts.**

The load in a ventilation duct is highest in the radial direction. The weave must be stronger radial in order to prevent longitudinal damage. Only Ventiflex uses these weaves.
- 4. Ventiflex tests and keeps records on all materials.**

Each roll of finished textile is tested and registered individually so the quality of all Deliveries can be confirmed.
- 5. Ventiflex uses a superior welding method.**

To be sure that all welding are as strong as the material, no hot-air or hot-knife welding is accepted.
- 6. The best suspension system is applied as standard.**

A fully welded ridge along the whole ventilation duct is recognised as the best fixing for suspension. Ventiflex uses this system as standard, whereas as others offer it at additional cost.
- 7. Strongest fixing point for suspension hooks.**

Ventiflex incorporates fully welded PVC plastic grommets to create a homogeneous fixing. Brass grommets can reduce strength by up to 50%.
- 8. Superior safety**

All Ventiflex grades are flame-retardant in accordance with international standards. In the case of accident we are able to document the material used in every duct.
- 9. Ventiflex - the safest ducting.**

We do not accept any compromises. This is why we have the thickest coating.
- 10. Reliable and responsible supplier.**

50 years' experience in ventilation and the production of flexible ventilation ducts.



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We are ISO 9001/14001 certified

